

TWO NEW SPECIES OF EPACRIDACEAE FROM VICTORIA

Y. MENADUE & R.K. CROWDEN*

ABSTRACT

Y. Menadue R.K. Crowden. Two new species of Epacridaceae from Victoria. *Muelleria* 8(3): 317–321 (1995). — *Richea victoriana* sp. nov. from the Baw Baw region is described and illustrated. Its affinity with *R. gunnii* Hook. f., a Tasmanian endemic, is discussed. *Epacris celata* sp. nov. from eastern Victoria and southern NSW, is described and illustrated. Its affinity with *E. breviflora* Stapf. and *E. petrophila* Hook. f. is discussed.

INTRODUCTION

The taxon here described as *Richea victoriana* was first brought to our attention in 1979 when it was collected by R.K. Crowden and examined by Y. Menadue in a chemotaxonomic survey of *Richea* R.Br. for her B.Sc. honours project. The results of this survey will be published later in the year in a revision of *Richea*. The frequency and relative concentration of substituted flavonols in the three species (*R. victoriana*, *R. gunnii* and *R. continentis*) relevant to this paper clearly separate these taxa. Walsh (1987) referred to the new taxon as *R. gunnii* Hook.f. in its first literature appearance and all plants subsequently have been designated as *R. aff. gunnii*.

The *Epacris* species was first collected by the authors in 1984 but its identification has created difficulties for much longer, being variously referred to as *E. breviflora* or *E. petrophila*.

These species are described as part of an ongoing general review of both genera and so that they may be included in the *Flora of Victoria*.

TAXONOMY

Richea victoriana Y. Menadue, sp. nov.

Richea gunnii Hook.f. affinis sed habitu grandi et ramosissimo, foliis longioribus latioribus tortisque, inflorescentia floribus plus numerosis, axe glabro et nectario destituta differt.

TYPUS: Victoria, Nine Mile Rd, 0.5 km N of Block 10 Rd, Thompson River headwaters, 40 km E of Warburton, alt. 1010 m., 37° 47'S, 146° 10'E (GR 4258–58205) 26 Dec. 1992, J. Davies (HOLOTYPE: HO 308233; ISOTYPE: MEL)

Erect, multi-branched shrub 0.3–2 m high, older branches bare of leaves with prominent annular scars. *Leaves* clustered near the top 10–40 cm of branches; imbricate and spreading, narrowly triangular, (3)–5–10 cm long, 5–11 mm wide, flat to concave; tapering to a pungent acute apex; base sheathing stem to 1 cm deep; lamina lacks distinct shoulder as leaf passes into sheathing base but margin becomes undulate in that area producing a twist in the leaves, margins scabrous. *Inflorescence* terminal, erect, slender panicles, 3–13 cm long, internodes upto 1 cm long; lateral floral branches glabrous, upto 1.5 cm long, bearing 3–20 flowers, subtended by bracts differing from leaves in having distinct shoulder and broad base to sheath the flowers, reducing in size distally, caducous. *Flowers* on short pedicels c. 1 mm long with narrow linear bracteoles, 2–4 mm long arising from the pedicels. *Sepals* 4–5, creamy-white, depressed ovate c. 1.6 mm long, 1.8 mm wide, obtuse. *Corolla* white, operculum narrowly ovoid-conical, 3–4 mm long, 1.5–2 mm wide above incision layer. *Stamens* 5–6; filaments 2–3.5 mm long, attached near top of anthers; *anthers* 1–1.5 mm long, opening by longitudinal slit. *Style* 1.5–2 mm long, 2/3 length of stamens, tapering; *stigma* indistinct; ovary globose, c. 1 mm diam. *Nectary scales* absent. *Capsule* 2–3 mm diam.; *seeds* oblong-elliptic, reticulate. (Fig. 1.)

*Department of Plant Science, University of Tasmania, GPO Box 252C, Hobart, Tasmania, Australia 7001



Fig. 1. *Richea victoriana* Y. Menadue. From the holotype.

ETYMOLOGY

This is a new endemic species for the state of Victoria so it is appropriate to name it after the state.

OTHER SPECIMENS EXAMINED

Victoria — from type locality, 15 May 1984, R.K. Crowden *s.n.* (HO 308263); 8 Feb. 1989, R.K. Crowden & Y. Menadue *s.n.* (HO 308264); 26 Dec. 1992, J. Davies *s.n.* (HO 308234); Upper Thompson River catchment, Newlands Rd extension, 4 km W from Rocky Knob, 7 Dec. 1981, N.G. Walsh 694 (MEL); Thompson Forest Wildlife Reserve, 24 Nov. 1982, A.C. Beauglehole ACB 71727 & C.M. Beardsell (MEL); c. 50 m S

of J.W. McMahon Ski Lodge, SE slope of Mt Erica, 7 Dec. 1984, *I. Salasoo* 6 (MEL); 5 km NNE Mt Margaret, upstream from crossing of Blue Range Road on Storm Ck, 23 Mar. 1985, *S. Forbes* 2820 (MEL); Near Scout Hut between Mt Erica summit and carpark, 13 July 1985, *D.E. Albrecht* 1846 (MEL); Upper Thompson R. at Newlands Rd Crossing, Jan. 1992, *J.B. Davies* s.n. (HO 132105):

DISTRIBUTION

The Baw Baw plateau and the Blue Range, between Marysville and Taggerty.

ECOLOGY

Locally abundant in wet heath or scrub land and on the fringes of cool temperate rainforest where it usually grows near streams or bogs with *Epacris paludosa* R.Br. and *E. microphylla* var. *rhombifolia* L. Fraser & Vickery (*E. coriacea* Cunn. ex DC. *sensu* Ross 1990). The main flowering period is between late November and early January. This species may produce adventitious roots from the lower stems and has the ability to layer.

DISCUSSION

The collections of *Richea victoriana* were previously referred to as *R. aff. gunnii* and the taxon does show affinity with *R. gunnii* in that both lose leaves early and have clear annular leaf scars and they grow in the same kind of environment. However *R. victoriana* is distinct in several characters. It differs in its habit, being a much larger more robust plant. Its leaves are considerably longer (5–10 cm) and wider (5–11 mm), and have a distinctive twist to them. The shorter (3–6 cm), narrower (5–7 mm), more rigid leaves of *R. gunnii* grow in a swirling arrangement around the stem. The inflorescence of *R. victoriana* has lateral branches bearing many more flowers (3–20) than *R. gunnii* (3–5). Individual flowers are similar although in *R. victoriana* the operculum is narrower, the filaments are attached to the top of the anthers and there are no nectary scales. Also the axis and lateral branches of the inflorescence are glabrous, but are minutely pilose in *R. gunnii*. *R. victoriana* inflorescence matures basipetally whereas *R. gunnii* matures acropetally.

There is only one other *Richea* occurring in Victoria and NSW and that is *Richea continentis*. This was described by B.L. Burt (1941) as a distinct taxon where it was previously thought to be *R. gunnii*. It is clearly different in habit, forming compact multi-branched shrubs, it does not have distinct annular scars and it has a narrow, elongated inflorescence and it matures acropetally.

Epacris celata R.K. Crowden, *sp. nov.*

Epacris petrophila et *E. breviflora* affinis sed foliis rotundioribus planioribusque, apice obtuso vel mucrone brevi, et foliis margine incrassato conspicuoque.

Typus: Victoria, Bogong High Plain, Watchbed Creek, 10 Feb. 1993, *R.K. Crowden & Y. Menadue* (HOLOTYPE: HO 308232; ISO TYPE: MEL)

An erect to spreading shrub, 20–60 cm high, young stems red-brown, ridged with raised leaf scars, pubescent; old stems dark grey-brown with flaking bark, scars inconspicuous. *Leaves* erect to spreading, elliptical or obovate, 2–4 mm long, 1.4–2.5 mm wide, glabrous; lamina flat rarely slightly concave, 1–3 veined, mid-rib conspicuous; apex broadly acute to obtuse, blunt or with short mucro; base broadly to narrowly acute; margin entire, distinctively thickened, scabrid in young leaves; *petiole* appressed upto 1 mm long glabrous or sparsely ciliate. *Flowers* few 7–8 mm diam., clustered at ends of branches, peduncle 1–2 mm long; *bracts* red-tinged ovate, margins ciliate; sepals red-tinged, 2.5–3 mm long, c. 1 mm wide, ovate-lanceolate, acute, margins ciliolate; *corolla* white, campanulate 2 mm diameter in the throat, tube 1–1.5 mm long, lobes spreading 2–3 mm long, apex obtuse; corolla caducous. *Stamens* 5, *anthers* visible in the throat, projecting inwards, c. 1 mm long, on filaments equally long, attached in centre; *stigma* rounded, below the level of anthers; style short and slender c. 0.5 mm long; *ovary* glo-



Fig. 2. *Epacris celata* R.K. Crowden. a — From the holotype. b — Close-up of part of this specimen showing typical leaf with thickened margin and small mucro.

bose, glabrous c. 1 mm in diameter; nectary scales truncate 1/4 ovary length. *Capsule* 2 mm diameter, seeds reniform and reticulate. (Fig. 2)

ETYMOLOGY

This plant is named because of its inconspicuous nature. It is usually hidden amongst other species and only noticed when in flower.

OTHER SPECIMENS EXAMINED

New South Wales — Kosciusko Nat Park nr 3-mile Dam, SW of Kiandra, 19 Jan. 1983, *M. Willis s.n.* (MEL 642770); Green Hole 12 km ENE of Kydra, 27 Dec. 1985, *P. Beesley 362 & D. Binns* (HO 110157).

Victoria — Bogong High Plains, 2.2 km west of Marm Pt, 4 Jan. 1982, *R.J. Adair 1415* (MEL); Bogong High Plains, Sister Species Gully, 2.2 km NW of Mt Cope, 8 Jan. 1983, *R.J. Adair 1424* (MEL); Buckety Plain c. 5 km ESE Mt Cope, 12 Jan. 1982, *R.K. Crowden & Y. Menadue s.n.* (HO 308236); Snowy Ra., Enclosure Plateau, 3km NE of Mt Reynard, 23 Jan. 1993, *D. Albrecht s.n.* (HO 308235); Bentley Plains c. 3 km E of Mt Nugong Trig Pt, 28 Dec. 1984, *D.E. Albrecht 1356* (MEL); Falls Creek, Eastern end of weir on Rocky Valley Storage, 19 Oct. 1990, *S.J. Forbes 762, R. Adair & M. Gray* (MEL, NSW); Bogong High Plains, Watched Ck nr gate on Mt Nelse Rd c. 3 km SW Mt Nelse, 13 Jan. 1982, *S.J. Forbes 791, R. Adair & M. Gray* (MEL); 3.5 km NE Mt Jim on Cope Ck, SE Pretty Valley Pondage, 14 Jan. 1982, *S.J. Forbes 815, R. Adair & M. Gray* (NSW); Guy's Hut on Bryces Plains, N of Snowy Plains, 31 Dec. 1959, *J.B. Muir 1000* (MEL); 200 m towards Falls Ck from cattle grid on Omeo-Falls Ck Rd, approx. 100 m south of road, 1 Jan. 1982, *H. van Rees 297* (MEL, NSW); Cobungra, Dec 1928, *H.B. Williamson s.n.* (MEL).

DISTRIBUTION

In Victoria on the Snowy Range at Mt Wellington and Mt Reynard, on Bogong High Plains and extending eastwards to Cobungra and Mt Nujong. In NSW in the

Kioscusko region at Perisher Gap and Kiandra, and in the Wadbilliga National Park.

ECOLOGY

Occurs in wet places or along stream banks in alpine heath usually with dense *Empodisma minus*. It is associated with *Baeckea gunniana*, *Epacris paludosa*, *E. microphylla* and *Richea continentis*.

At lower altitudes it occurs on poorly drained skeletal soils in heaths and open forests.

DISCUSSION

Epacris celata belongs to a group of *Epacris* having very similar campanulate flowers clustered in heads. Members of this group are separated only on vegetative features. It has previously been referred to as *E. petrophila* or *E. breviflora* but differs from both in several leaf characters. *E. celata* has rounder leaves (length to width ratio is 1.5) than *E. petrophila* (l:w = 1.7) and *E. breviflora* (l:w = 1.8), flatter leaves and a rather smooth, conspicuous margin that is rarely serrulate. *E. petrophila* has leaves more appressed to the stem, distinctly keeled, an inflexed acute apex with a blunt mucro and its leaf margin is serrulate. *E. breviflora* has leaves more spreading and often recurved distally. Its apex is acute or acuminate, drawn out to a pungent mucro but with no distinct shoulder. The new species has a rounded, blunt apex or a rounded apex with a short mucro as an extension of the main vein. *E. breviflora* usually has larger leaves (range 5–10 mm) and *E. petrophila* usually has smaller leaves (1.1–3.3 mm) than *E. celata*. The lower altitude specimens of *E. celata* have leaves longer and more elliptic than from higher altitude specimens.

ACKNOWLEDGEMENTS

We thank John Davies for providing flowering material for the *Richea victoriana* type and for his observations, and David Albrecht for fresh specimens of *E. celata* and his comments. Also thanks to Gintaris Kantvilas for assistance with the Latin diagnoses and the National Herbaria of Victoria and New South Wales for access to collections.

REFERENCES

- Burt B.L. (1941). *Richea scoparia*. Epacridaceae *Curtis's Bot. Mag.* Tab. 9632.
 Ross, R.H. (1993). *A census of the vascular plants of Victoria, Fourth Edition*. (National Herbarium of Victoria: Department of Conservation, Forests and Lands, Melbourne.)
 Walsh N. G. (1987). Notes from the National Herbarium of Victoria -4. *Richea gunnii* J.D. Hook. (Epacridaceae): A new heath for Victoria. *Victorian Nat.* Vol. 104 (3).